

ABSTRACT

A grating of the present invention has a groove cross section shaped, for example, like a sinusoidal wave or a sawtooth other than a laminar shape, and a groove bottom part shaped as a flat form. In a region wherein the groove cycle and the used wavelength are the same degree for wavelengths from near infrared to infrared, the grating of the present invention has the excellent spectrum performance (high efficiency in balance in a wide wavelength zone) more than a holographic grating and an echelle grating in related arts. When replicas for the grating of the present invention are manufactured, the engagement force of grooves with each other is small as the groove aspect ratio is small, and a release agent sufficiently reaches the groove bottom as the groove bottom is large.

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